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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/592,308	06/13/2000	Cary Lee Bates	ROC920000014	7379

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EXAMINER

SMITH, PETER J

ART UNIT	PAPER NUMBER
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2176

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DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

file

Office Action Summary	Application No. 09/592,308	Applicant(s) BATES ET AL.	
	Examiner Peter J Smith	Art Unit 2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-13,15-22 and 24-30 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-4,6-13,15-22 and 24-30 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: application filed on 06/13/2000, IDS filed on 07/10/2000.
2. Claims 1-4, 6-13, 15-22, and 24-30 are pending in the case. Claims 1, 10, and 19 are independent claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-3, 10-12, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Damerau et al. (hereafter referred to as Damerau), US 5,258,909 patented 11/2/1993 in view of McRae et al. (hereafter referred to as McRae), US 4,847,766 patented 7/11/1989 and Fein et al. (hereafter referred to as Fein), US 5,940,847 filed 1/31/1997.**

Regarding independent claims 1, 10, and 19, Damerau teaches allowing a user to replace each problem word contained in a document with a respective replacement word in col. 1 lines 38-52. Damerau does not specifically teach storing each problem word and respective replacement word to a first data structure, wherein each problem word is associated with the respective replacement word in an individual record of the first data structure. Damerau does teach comparing each problem word and each of a set of replacement words in fig. 4. McRae

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teaches a list of each problem word which may be customized by the user and respective replacement word, wherein each problem word is associated with the respective replacement word in the abstract and col. 3 lines 2-40. Fein teaches storing each user-replaced problem word and respective replacement pairs into an individual record of a data structure to form a customized substitution list in the abstract and col. 3 lines 30-61.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined McRae and Fein into Damerau to have created the claimed invention. It would have been obvious and desirable to have saved the comparisons of the problem word and each replacement word into a data structure so that it could form a list such as that taught by McRae and have been used again in the future. This would have reduced the computational time required to replace the problem word in the future. Fein teaches a need and solution for user created and customized spelling correction lists. The user may create and save problem words and respective replacements into an individual record specific to the user. This further provides motivation for one of ordinary skill in the art to have combined McRae into Damerau to have saved the problem word and replacement pairs into a data structure as taught by McRae.

Regarding dependent claims 2, 11, and 20, Damerau teaches accessing a data structure to identify problem words in another document in col. 1 lines 38-52.

Regarding dependent claims 3, 12, and 21, Damerau teaches editing a document to replace problem words with replacement words in col. 2 lines 24-41. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have stored and compared the pre-edited and post-edited content to identify the problem words and replacement

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words because those would have been the only words different between the two document versions.

Regarding dependent claims 28, 29, and 30, Damerau does not teach receiving user identification and storing the user identification in association with the first data structure. Fein does teach a user-specific and user-customizable data structure containing an individual record of problem words and respective replacements in the abstract and col. 3 lines 30-61. The customized substitution list must inherently receive a user identification in order to provide the correct list to a particular user and the list inherently associates the user identification with the word-replacement pairs contained in the list for a particular user. It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined Fein into Damerau in view of McRae to have created the claimed invention. The user customization taught by Fein would have allowed for the personalization of the spelling correction for each user of the system.

4. Claims 4, 13, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Damerau et al. (hereafter referred to as Damerau), US 5,258,909 patented 11/02/1993 in view of McRae et al. (hereafter referred to as McRae), US 4,847,766 patented 07/11/1989 and Fein et al. (hereafter referred to as Fein), US 5,940,847 filed 1/31/1997 as applied to claims 3, 12, and 21 above, and further in view of Lange et al. (hereafter referred to as Lange), US 4,674,065 patented 06/16/1987.

Regarding dependent claims 4, 13, and 22, Damerau does not specifically teach storing pre-edited and post-edited contents into a data structure. Damerau does not specifically teach wherein each record of the second data structure includes a pre-edited word field, a post-edited

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word field and a changed indication file. Lange does teach storing pre-edited and post-edited contents into a data structure in fig. 1, fig. 2 and col. 2 line 67 – col. 3 line 1. Fein does teach a data structure which includes a pre-edited word field and a post-edited word field in the abstract and col. 3 lines 30-61. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Fein and Lange into Damerau to have created the claimed invention. It would have been obvious and desirable to have stored both the pre-edited and post-edited contents into a data structure so that they would have been stored in the same location which would have allowed for easy comparison of the two contents. It would have been obvious and desirable to have maintained a pre-edited and post-edited field with a change indication to determine which problem word and replacement word pairs were used in the contents.

5. Claims 6-7, 15-16, and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Damerau et al. (hereafter referred to as Damerau), US 5,258,909 patented 11/02/1993 in view of McRae et al. (hereafter referred to as McRae), US 4,847,766 patented 07/11/1989 and Fein et al. (hereafter referred to as Fein), US 5,940,847 filed 1/31/1997 as applied to claims 1, 10, and 19 above, and further in view of Grover et al. (hereafter referred to as Grover), US 5,818,437 patented 10/06/1998.

Regarding dependent claims 6, 15, and 24, Damerau does not teach assigning a priority value to each problem word. Grover does teach assigning a priority value to each problem word in col. 7 line 61 – col. 8 line 4. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Grover into Damerau to have created the

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claimed invention. It would have been obvious and desirable to have assigned a priority value to the problem words so that the user could have known which words were the most problematic for them.

Regarding dependent claims 7, 16, and 25, Damerau does not teach wherein the priority value is determined according to a number of times a particular problem word is replaced by the user with the respective replacement word. Grover does teach wherein the priority value is determined according to a number of times a particular problem word is replaced by the user with the respective replacement word in col. 7 line 61 – col. 8 line 4. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Grover into Damerau to have created the claimed invention. It would have been obvious to have assigned the priority value based on word frequency since the most frequent problem words are the ones which would the user needs the most help in fixing.

6. Claims 8-9, 17-18, and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Damerau et al. (hereafter referred to as Damerau), US 5,258,909 patented 11/02/1993 in view of McRae et al. (hereafter referred to as McRae), US 4,847,766 patented 07/11/1989 and Fein et al. (hereafter referred to as Fein), US 5,940,847 filed 1/31/1997 as applied to claims 1, 10, and 19 above, and further in view of Cai et al. (hereafter referred to as Cai), US 6,175,834 B1 filed 06/24/1998.

Regarding dependent claims 8, 17, and 26, Damerau does not teach assigning a formatting definition to each problem word for use in identifying words on a display device. Cai teaches assigning a formatting definition to each problem word for use in identifying words on a

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display device in col. 8 lines 18-22. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Cai into Damerau to have created the claimed invention. It would have been obvious and desirable to have highlighted the problem words so that the user could have easily viewed them in the document.

Regarding dependent claims 9, 18, and 27, Damerau does not teach wherein the formatting definition is selected from one of a color, a shading, a textual modification, an underline and any combination thereof. Cai teaches wherein the formatting definition is selected from one of a color, a shading, a textual modification, an underline and any combination thereof in col. 8 lines 18-22. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Cai into Damerau to have created the claimed invention. It would have been obvious and desirable to have highlighted the problem words so that the user could have easily viewed them in the document.

Response to Arguments

7. Applicant's arguments filed 4/1/2004 have been fully considered but they are not persuasive. The Examiner has additionally introduced Fein et al. (hereafter referred to as Fein) to teach the amended limitations of claims 1, 10, and 19 as well as the limitations of new dependent claims 28-30. Fein teaches a user created and customized data structure containing problem word and replacement pairs for the specific use of the user who created and customized the data structure. Regarding Applicant's argument on pages 7 and 8 that it would not have been obvious to have combined McRae et al. (hereafter referred to as McRae) into Damerau et al. (hereafter referred to as Damerau) the Examiner believes it would have been obvious to one of

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ordinary skill in the art at the time of the invention to have combined the two references. Both Damerau and McRae solutions to problems wherein a word is inputted that is spelled correctly, but is actually the incorrect word because another word was intended for input by the user. Both of these are in the same field of invention as each other and the claimed invention and thus the Examiner does not think it unreasonable to combine the two teachings.

Regarding Applicant's argument on page 8 that neither Damerau nor McRae teach the limitations of claims 3, 12, and 21, the Examiner believes the pre-edited and post-edited versions of the content inherently exist because the content exists both before and after the problem words are replaced. In view of this, the Examiner believes it is merely a simple modification of recording the contents at the two specified times which both must exist to read upon the claimed invention. This provides a history record of the modifications made to the document. The Examiner believes one of ordinary skill in the art at the time of the invention without hindsight knowledge of the claimed invention would have been motivated to have created a history to have identified the problem words and their replacements by the means of the claimed invention or some other equally effective means.

Regarding Applicant's argument on page 9 that the combination of Damerau, McRae, and Lange do not teach the limitations of claims 4, 13, and 22 the Examiner believes Lange stores the words and instructions in separate sections. The Examiner believes it would have been obvious to one of ordinary skill in the art at the time of the invention to have used this organizational teaching of Lange to improved Damerau in view of McRae.

Regarding Applicant's argument on pages 9 and 10 that the combination of Damerau, McRae, and Grover does not teach the limitations of claims 6-7, 15-16 and 24-25 the Examiner

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believes Grover teaches the determining and recording the importance of words entered by a user based on the frequency of the word being used by the user. The Examiner believes Grover is relevant to Damerau and McRae since they are tools to correct erroneous input made by the user. The combination of the frequency importance teaching of Grover combined with the input correction teachings of Damerau and McRae render the claimed invention obvious.

Regarding Applicant's argument on page 10 that the combination of Damerau, McRae, and Cai does not teach the limitations of claims 8-9, 17-18, and 26-27 the Examiner believes Cai teaches marking a problem word with a highlight or an underline and is very relevant to the tasks performed by Damerau and McRae. The problem word marking of Cai combined with the input correction teachings of Damerau and McRae render the claimed invention obvious.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Roth, US 5,907,839 filed 7/3/1996 discloses an algorithm for context sensitive spelling correction.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Smith whose telephone number is 703-305-5931. The examiner can normally be reached on Mondays-Fridays 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on 703-305-9792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PJS
June 4, 2004


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER